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THE GENESEE FARMER.

SATURDAY, DEC. 13, 1834.

On the Grand Divisions of the VEGETABLE KINGDOM.

Some botanists have separated the vegetable world into three series or grand divisions:

1. Acotyledones—*without* cotyledon or seed-leaf, as the mushrooms, ferns, and mosses.
2. Monocotyledones—with *one* cotyledon, as oats, Indian corn, and onions.
3. Dicotyledones—with *two* cotyledons, as the cucumber, the pole bean, and the peach tree.

More extended observations have discovered exceptions to these terms. Both *Cuscuta* and *Utricularia* have *no* cotyledons, and yet nothing but the class Cryptogamia of Linnæus, was intended to be included with Acotyledones. Some plants that unquestionably rank with Monocotyledones, have *two* cotyledons, as the common wheat; and some that ought to be Dicotyledones, have only *one* as *Penæa* (evergreen shrubs from the Cape of Good Hope,) to which we may add *Claytonia virginica* of our own country. *Pæonia* might be named as another; but a provision was made to meet such exceptions by including as dicotyledonous, all plants that had *the* cotyledon divided. Other plants however, as *Schizopetalon*, *Benthamia*, and most of the Coniferæ, have several cotyledons.*

Late authors have adopted the term Cellulares instead of Acotyledones on account of its expressing the most obvious character upon which the Division depends,—namely the *cellular* structure of the plants which compose it, and which are formed *entirely* of cellular tissue.† It is composed of transparent vesicles; and each is distinct, cohering with those which it touches, so that the membrane that divides any two of them, is in fact double. These vesicles when separate, are round or oblong; when slightly or equally pressed together, hexagonal; and when stretched lengthwise, prismatical, cylindrical or fusiform. They transmit fluids in all directions.*

Cellulares having no stamina and pistils can have *no* seeds; and they are increased by little bodies called *sporules* which germinate from no particular point. Some organs in the Mosses indeed, have been called anthers; but they do not appear analogous to the stamina of flowering plants, and their nature has not been demonstrated.*

Vasculares has also been adopted instead of the terms which we have already given for the second and third Divisions. These plants differ from the former in their *vascular* or tubular structure,—having *woody fibre* which consists of elongated tubes tapering to each end; and *spiral vessels* which are of elastic tissue and twisted spirally into the form of a cylinder capable of unrolling.* Professor Nuttall says if a leaf or green twig of Elder (*Sambucus canadensis*) be partially cut, then cautiously broken, and the divided portions be carefully drawn asunder, the spiral vessels will be seen, appearing like a screw. The leaves of vascular plants are also traversed by *veins*, and bear *perfect flowers*.

The distinctions between these two Divisions however are very remarkable in many particulars, besides the difference in the number of their cotyledons. "In Endogenes (or Monocotyledones,") says Loudon, "there is *no distinction between wood and bark*; in Exogenes (or Dicotyledones) *the wood and bark are distinctly separated*. In Monocotyledones *the wood and cellular tissue are mixed together* without any distinct annual layers of the former being evident; in Dicotyledones the wood and cellular tissue have each their particular limits assigned them, *a distinct layer of the former being annually deposited*. In Monocotyledones there are no radiations from the medulla to the bark; in Dicotyledones the radiations are distinctly marked. In Monocotyledones there is generally† *no articulation between the leaves and the stem*, while in Dicotyledones *the leaves are always jointed with the stem from which they fall off leaving a scar behind*. In Monocotyledones the veins of the leaf pass *in parallel lines* from the base to the apex; in Dicotyledones they *diverge from the midrib towards the margin* at various angles; in the former they are *unbranched*, the principal veins being connected by nearly *simple secondary* veins; in the latter they are *much branched*, ramifying in many directions, and giving the surface of the leaf *a netted appearance*."

A few explanatory remarks may be proper. All the trees of cold climates are dicotyledonous; and we may observe that round the pith of the oak, a new layer of wood is applied every year in concentric circles, so that the age of the tree may be discovered. It is also remarkable for the Silver Grain, Medullary Rays, or Divergent layers, which extend from the pith outward to the bark, and seem to bind together all the circles of the wood. Nothing of the kind however, occurs in monocotyledonous plants. Their stems simply consist of bundles of woody fibres and vessels interspersed through a cellular substance; and if the plant be a tree, the circumference is the oldest part, all the annual additions being applied at the center. This new matter crowds the woody fibers which were diffused through the cellular tissue, closer together till they form a continuous circle of wood. On this account the Palms rarely if ever increase in diameter. The *Ptychosperma gracilis* rises more than sixty feet with a stem not four inches in thickness; and the *Areca oleracea* (Betel nut) though it never increases in girt, often rises to the hight of one hundred and eighty feet.‡ The *Panicum arborescens*, one of the grasses, is said by Linnæus to contend for hight with the loftiest trees in the East Indies though the culm is scarcely thicker than a goose quill.*

To resume our remarks: The trees of one Division grow *on the inside*, and trees of the other Division *on the outside*; the youngest wood of the former being found at the center of the stem, while the youngest wood of the latter constitutes the circumference. The bark to protect the tender fiber in the one case is therefore an indipensable provision, but it would be useless in the Palm tree. The epidermis in Monocotyledones is indeed, so closely applied to the part which it covers, as to be inseparable from it by any means;† and whoever will make the attempt on a straw of wheat, or the stem of a lily, will be soon satisfied of this truth.

We have said that all the trees of cold climates were Dicotyledones; and they also extend into the torrid zone; but it is only in warm regions that any plants of the other grand Divisions, become arborescent. The Bamboo, (*Bambusa arundinacea*) is properly one of the grasses, growing to the hight of more than forty feet, and serving many of the purposes of a valuable timber tree. It is of great use in building; and in the East Indies the houses of the meaner people are almost entirely composed of it. Dr. Patrick Brown mentions that it was yet strong and perfect in some of the houses which had been built by the Spaniards in Jamaica above a hundred years before. Bridges are also made of it, and masts for boats.*

It is more remarkable however that plants which *are entirely destitute of woody fibres*, should rise in warm climates to the hight of trees; yet such is the case with Ferns which vie with the Palms themselves in stature and comeliness, constituting a principal ornament of the torrid zone, and forcibly striking every European stranger by its novelty.‡

Ferns approach the nearest in their structure to vascular plants. Some botanists have even classed them as monocotyledonous; but Loudon says that though *apparent* veins are found in the leaves, yet as they are *imperfectly supplied* with spiral vessels, they cannot be considered more than analogous to the veins of other plants. Lindley is more positive, and says they "are universally destitute of spiral vessels. To this statement there is no known exception:—species to which spiral vessels have been ascribed, being found to possess nothing more nearly related to those organs, than ducts or false tracheæ."

Fungi (mushrooms and mould) take the lowest station of vegetable existence, and dicotyledonous plants the highest.

* Lindley. † Loudon.

* Lindley.
† We suspect that the leaves of Palm trees form an exception. ‡ Nuttall.

* Loudon, Enc. Plants. † Nuttall. ‡ Humboldt.

A Subscriber for Life.

One of our patrons recently called on us to settle his subscription, and on being asked if he wished the paper continued, he promptly replied, "*I am a subscriber for life.*" Such men cannot fail to obtain wealth—and what is still better, knowledge. This individual, though ed-

ucated a mechanic, has turned his attention to the cultivation of the earth, and as a wise man, has resolved to profit by the experience of others—to combine *theory* with *practice*. A subscriber to an agricultural journal has always at his command the detailed experience of the best farmers of the age, and it would indeed be extraordinary, if from such a mine, he could not derive instruction.

We are aware of the almost invincible repugnance, which some have to what they call "*Book Farming*," yet in a great majority of cases it is believed, that this repugnance is founded in a misapprehension of the subject, and that its removal is sure to follow an acquaintance with an agricultural paper. If any who are yet strangers to the benefits which such a paper confers shall read this, we hope they will test the truth of our remarks by becoming subscribers to the Genesee Farmer, and we doubt not that after reading it they *too* will become "*subscribers for life*."

Chinese Chrysanthemums.

(*In a letter of the 1st instant.*)

In some years, when the autumnal frosts are not severe, Chinese Chrysanthemums become very ornamental in the open border; but in the present season which has been rather remarkable for rough weather, I have only one kind which came fully into bloom. This sort I believe is known to gardeners by the name of the Early Crimson. It is not strictly a crimson however, but a reddish purple; and though not perfectly clear, it is the finest and brightest specimen of the Red that I have seen in this genus. Its earliness and hardiness would indicate it as a native of a higher latitude than most of the other varieties. In regard to its latter quality: On the morning of the 15th *ultimo*, the thermometer stood at 20°. showing 12°. of frost; and though these flowers were uncovered, they have not sustained the slightest injury, and appear as fresh as on the day that they came into bloom. All my other Chrysanthemums with the same exposure, have suffered severely.

All of them as well as the Early Crimson, had the protection of a board fence on the north side.

South Down Sheep.

A correspondent of the Cultivator notices the arrival in the ship Hannibal, of six ewes and a buck, of this highly esteemed breed of sheep, imported by FRANCIS ROTCH, Esq. of Butternuts, Otsego county, from the famous flock of Mr. John Ellman of England. Mr. Rotch deserves the thanks of the community for his exertions to introduce into our country the best breeds of animals to be procured in Europe. He has now, we are informed, on his farm at Maple Grove, some of the finest specimens of the Improved Short Horn Cattle, which could be procured in England. The writer in the Cultivator, speaks of this importation of sheep as follows:

They were in fine condition, and did not appear to have suffered in the least from the voyage, which is a strong argument in their favor as to hardihood.

The buck is rather larger than they generally are, but of fine form and symmetry—great length, round and deep in body—fine in the head and legs—full and capacious chest—remarkably broad in the loin and heavy in the quarters—and well covered with a close fine fleece of wool.

The ewes are equally beautiful, and show higher breeding than the buck, and of course not so large. Take them together, I saw more to admire, more good points, more style and fashion about them than any others I ever witnessed.

This breed of sheep are justly becoming great favorites in this country. They will, I think, cross well with the Merino or our native sheep, giving them stronger constitutions and a greater aptitude to fatten.

From the transactions of the Pennsylvania Agricultural Society, I have transcribed the following account of this breed of sheep.

"The South Down sheep are much smaller than the Dishly—they are more hardy—their wool is short, equal in quality to that of half-bred Merino—their fleeces are not so heavy—they carry more fat within, and much more flesh without, than either the Dishly, Tunisian, Irish or Teeswater sheep. By their activity and vigor, both of muscle and constitution, they are fitted to encounter every difficulty, as well as to endure the extremes of heat and cold. They occupy, in England, one of the most exposed and least fertile portions of the Island. Their mutton is of the finest kind, and commands the highest price, although, from the properties of the sheep, it can be produced at the least cost.

"I am of opinion," says this writer, "that the South Down sheep are as valuable a stock, if not more so, than any other that have been kept in this country."

"The fleece is close, heavy, and sufficiently fine for general purposes, and a small part fine enough for any purpose to which wool is likely to be applied for many years to come."

From the New York Farmer and Horticultural Repository, the following description of these sheep is taken.

"*The South Down sheep* are without horns; they have dark or black-grey faces and legs, fine bones, long small necks; are low before, high on the shoulders, and light in the fore quarter: the sides are good and the loin tolerably broad, back bone too high, the thigh full and twist good. The fleece is very short and fine, weighing from two and a half to three pounds. The average weight of two year old wethers is about eighteen pounds per quarter, the mutton fine in the grain and of an excellent flavor: These sheep have been brought to a high state of improvement by Ellman, of Glynde, and other intelligent breeders. They prevail in Sussex, on very dry chalky downs, producing short fine herbage."

ERRATA.—Page 370, column 1, line 23 from bottom, for *now* read *new*—p. 372, col. 3, line 11 of "Highways," for *The* read *Two*—p. 361, col. 2, line 19 from bottom, for *of* read *if*—p. 353, col. 1, last line of first paragraph, for *straw* read *stones*.

NEW-YORK MIRROR.—The last number of this truly popular periodical, contains a finely engraved portrait of Mr. George Hill, the comedian. This engraving is not one of the quarterly embellishments of the Mirror, but is given as an extra by the liberal and enterprising proprietor.

Culture and Produce of 36 1-2 ACRES.

The following statement, copied from the Cultivator, is, we presume, from Judge BUEL's Memorandum Book:

I send you, Messrs. Editors, a memorandum of the produce of thirty six and a half acres of land, the past season, in grain and grass, not on account of any thing worthy of notice in the result, but that others may profit by my *errors* as well as by my wisdom. The soil is a sandy loam, and no part received but one ploughing for a crop.

17	acres produced...	53 tons of hay,
4	.....	74 bushels rye,
1	acre.....	2.....wheat,
1½	acres.....	574.....ruta baga,
4	.....	776.....potatoe,
5	.....	360.....sound corn*
4	.....	87.....barley.

36½ acres.

REMARKS ON THE CULTURE.

Hay.—The crop was impaired by the frost of last winter having killed much of the clover, particularly on about three acres laid down last year. Two acres were in a reclaimed swamp, which were cropped with potatoes in 1833. The wet spring not permitting the ground to be ploughed in due time, and the grass, which sprung up spontaneously, promising something of a crop, it was suffered to remain. The product was but *so so*. Three and a half acres were a ley of four or five years, which ought to have been broken up before; as grass, with me, generally diminishes after the third year. The residue bore a heavy crop, and averaged, by estimation, three tons an acre.

Rye.—As it is my maxim to sow this grain either very early or very late, I was obliged to sow late, in consequence of the ground having been encumbered with a potatoe crop. The product was a fair crop, though I think that if three or four pecks more of seed had been sown on the acre, there would have been a corresponding increase in the product. The grain was good, but thin, the late sown not tillering like that which is sown early.

Barley.—One half of the barley ground was over-manured, and the grain was prostrated before it got into blossom. The product of this part was of course trifling. It should have had no manure, as it followed a crop of ruta baga well dunged. Besides, it does not answer to have barley ground too rich, or to apply to this crop long manure.

Wheat.—This was sown in February, on ground ploughed in the fall. It promised tolerably well, until it was attacked by the wheat insect, which virtually destroyed the crop. Scarcely a head contained more than three or four kernels, and in some cells, while the grain was standing, I found five and six insects.

Ruta Baga.—This was the poorest crop I ever raised of the kind, and the failure is not attributable to any error of mine, but to the dry summer. It was sown upon an old grass ley, previously pastured, and dunged, ploughed and harrowed just previous to drilling in the seed.—The soil was very dry when worked, and there

* My *soft* corn and small potatoes and some pumpkins, have fattened about 2,500 lbs. of pork, *finished*, during the last ten days, with *hasty pudding*.

was not sufficient rain afterwards to bring on a decomposition of either the manure or the sod. Comparatively but few of the seeds grew, and the rows were not half filled with plants. In a favorablle season the product would have been more than double.

Patatoes.—Two acres were on a grass ley, well dunged with long manure, and gave a good crop for the season, of more than 300 bushels the acre. This crop received two ordinary dressings, but after harvest I caused all the weeds to be pulled up, and carried to my cow yard, which, I am confident, added very greatly to the potatoe crop. One acre was planted on gronnd habitually wet, and which had been underdrained late the preceding fall. The ground was but imperfectly ploughed, the crop was badly tended, and the product was hardly worth gathering, even in this season of scarcity. The fourth acre was principally on ground where barley had been seriously injured by the frost of the 15th May; it was planted late, with refuse seed. The ground was very dry, and from late planting, bad seed, and a very dry season, the product did not exceed 100 bushels. My practice is not to earth potatoes after the tubers have begun to form, as earthing them is apt to cause a new set of stolens to start near the surface, which rob the elder ones of their food, and produce potatoes only of a diminutive size. Yet weeds ought to be carefully extirpated, as they not only impoverish the soil, but shade the ground, to the great prejudice of the crop. The labor of extirpating weeds is amply repaid in the increased product. I think I am warranted in saying, that a clover ley, and long manure, the latter well spread and ploughed under, are admirably adapted both to the corn and potatoe crop.

Corn.—This and the unproductive acre of potatoes, were grown in a field abounding in springs, and heretofore habitually wet, but which was underdrained the preceding autumn. A part of the ground had been in pasture, and a part under tillage, and the whole was well manured. The hills were planted three by two and a half feet apart, and there remained after the first dressing, four spears in almost every hill. The corn was dressed with the harrow and cultivator, and twice hoed, though but very slightly hilled. Four-fifths gave an uncommon fair crop. Sixty-three selected ears gave a half bushel of shelled grain, averaging more than half a pint each. The other fifth was killed by kindness, or rather from want of personal attention. Having two loads of horn shavings and crushed bones, I directed them to be spread on *two* acres; but my men, being unacquainted with these materials, and not appreciating their strength as a manure, thought to do me a kindness, and applied the whole to *one* acre. The consequence was, the stalks were too luxuriant and tender, and the wind prostrated them flat to the ground ere the grain was half grown, and but very little of the corn was fit for the crib.

At present prices, the products I have enumerated are worth about $1,300, and average about $36 to the acre.

The errors in my practice, against which I would guard the reader, are—

1. In sparing grass lands from the plough after the cultivated grasses have mostly run out, and after the product has materially diminished.

2. In sowing *late* rye too thin.

3. Applying manure to a barley crop, the soil of which was already rich enough—particularly long manure.

4. In planting potatoes too late, and with bad seed.

5. In the excessive and wasteful application of bone and horn manure. And finally,

6. In not superintending personally ALL the operations of the farm. We may hire men to *work*; but it is difficult, as my friend Delevan observes, to hire men to *think correctly*.

By way of posteript I will remark, that I had made, in 1833, in the six acre field in which I grew my corn, about 200 rods of brush and straw underdrains, which cost me about $20, and that I think I am fully remunerated for this outlay in the *increased* product of the field in the past season.

B. J.

Experiments in Raising Potatoes.

By JOHN ROBINSON, of Carlow, Ireland.

Experiment 1.—Mr. Robertson marked off, on an average portion of his potatoe ground, four drills, twenty yards each in length; in two of these he planted potatoe seed of the red-nosed kidney species, and in the remaining two of the apple kind. These he earthed up in the usual way: in these earthed drills the produce was six lb. (about 10 per cent) less than in four corresponding ones unearthed. In all those drills, (which were 30 inches apart,) the sets were placed from ten to twelve inches asunder. The treatment of the unearthed drills may be thus stated: They were dug at bottom twelve inches deep, and left half full of the crumbling clods; on these the potatoes were laid, and then covered about three inches with dung, over which an inch of fine earth was drawn. When the shoots were sufficiently high, the clods were broken fine and closed about the stems, and the ground in the intervals dug deep and fine as possible, and left perfectly flat; this was the only tillage which the unearthed potatoes received. The produce was about 150 barrels* to the acre.

Experiment 2.—In order to determine at what distance in drills 30 inches apart, it is advantageous to plant the sets, Mr. Robertson proceeded as follows:

In a piece of ground of sixty square yards, (not yards square,) he planted eight drills of a new seedling cup potatoe at thirty inches distance; these drills, nearly nine feet in length, he planted at the distance above stated as follows:

Drill 1 the sets	9 inches apart, and	1 shoot left.
.... 2	9	2 .....
.... 3	12	1 .....
.... 4	12	2 .....
.... 5	16	1 .....
.... 6	16	2 .....
.... 7	18	1 .....
.... 8	18	2 .....

The produce was—

	Bbls.	st.	lbs.
Drill 1	0	6	2
..... 2	0	4	7
..... 3	0	3	1
..... 4	0	4	3
..... 5	0	3	6
..... 6	0	4	7
..... 7	0	3	3
..... 8	0	6	1
Gross produce,.....	1	15	2

* The Kilkenny barrel contains 20 stone of 14 lb.; the total was therefore about 700 bushels. Which is about 228 barrels, or 28 tons 10 cwt. to the Irish acre, accurately weighed. This enormous produce was from an alluvial soil light and deep.

Experiment 3.—To ascertain the result of giving unlimited room to the potatoe, and the depth to which the roots would run if unrestrained.

On a piece of ground trenched upwards of three feet, Mr. Robertson planted eight whole potatoes, each three feet apart in the row, with unlimited room to grow at each side. The produce was six stones, and the fibres were traced downwards three feet, the space they occupied being equal to that of two drills in Experiment 2.

Experiment 1 proves the inutility of earthing.

Experiment 2 gives an interesting demonstration of the advantage of free access of air, the outside drills giving such superior produce; and the advantage (25 per cent) of the double stemmed ones over the single, at the same distance, proves (combined with the other circumstances) the truth of Mr. Knight's theory, that, in proportion to the abundance of its foliage, and the free access of air and light, will be the productiveness of the potatoe.

From the similarity of produce in the corresponding drills of Nos. 2, 4 and 6, and in Nos. 3, 5 and 7, it would appear of little importance at what distance the sets are placed in the drills, provided they have sufficient room to spread at each side; and the extent of this must be regulated by experience.

It is of the highest importance, however, that the ground should be deeply worked and highly pulverized; for the potatoe fiber is extremely delicate, and cannot penetrate through a hard unyielding soil, though it will run freely through that which is loose, and occupy the pulverized intervals between the drills.

Mr. Robertson deems it highly absurd, in shallow soils, to heap on the top of the potatoes, where it affords no nutriment, the earth which, if left within the range of fiber, would feed it. However, it is to be remembered, that *some species* of potatoes strike upwards, *cups* for instance, (though it appears that Mr. Robertson used these in this experiment;) and in such case earthing is most probably useful. *Apple* potatoes have a downward tendency, and therefore may not require moulding. The species under culture, and the nature of the soil, should also materially influence the farmer as to the disposition of the manure under or over the set. It is obvious that (on a dry and porous soil in particular) in the culture of *cup* potatoes, the vegetating tendencies of which are to the surface, it is injudicious to place the manure under the sets.—*Q. J. Ag.*

THE FÆCAL EXCRETIONS OF PLANTS.—We are pleased to find the following notice, and expect, from the "inquiry," to have much light on the subject.

The committee of botany of the British Association for the Advancement of Science, have requested Professor Daubeny, of Oxford, "to institute an extended inquiry into the exact nature of the secretions by the roots of the principal cultivated plants and weeds of agriculture; and that the attention of botanists and chemists be invited to the degree in which such secretions are poisonous to the plants that yield them, or to others; and to the most ready method of decomposing these secretions by manures, or other means." Dr. Lindley has also proposed the same thing as a desideratum.

For the Genesee Farmer.

Notices of the Italian Rye-Grass.

I sowed last spring a small quantity of the seed of this grass, which had been given me by Judge Buel. It readily germinated; but, during the long and severe drouth of summer, the grass was not rank in its growth, being not only injured by drouth, but also annoyed by the large white worm having a brown head. In the soil where it grew, these worms abounded. Several of the roots, however, sent up seed stems, and perhaps if I had watched my opportunity, I might have saved seed. After the rains began to fall, and autumn came on, the grass assumed a more thrifty aspect. It is now perfectly healthy, rank, and thick set. Its adaptation to our soil and climate, and to the uses of our husbandry, will be better known, after the experiments of another year. DAN BRADLEY.

Marcellus, Nov., 1834.

For the Genesee Farmer.

Query to Farmers.

Winter has come, and what provision have you made for passing the long evenings of the four ensuing months pleasurably and profitably to yourself and others? The farmer who thinks it will do now, as formerly, to sit by the fire and drink cider, and tell stories through the winter, has not kept pace with the spirit of the times; he is lamentably behind the spirit of the age in which we live. There has it is evident, a certain class of individuals grown up in our land, who speak of and treat the cultivators of the soil as an inferior caste, men who cannot understand the leading topics of the day, whose utmost abilities are confined to the merit of being able to discuss a boiled potatoe and a rasher of bacon, and who ought not to be entrusted with legislating for themselves, much less for others. If as a body the farmers are obnoxious to this reproach, we surely should lose no time in correcting the evil—if as is believed, these aspersions are calumnious, they must be lived down. The farmer has no excuse for ignorance. Information on all the useful and necessary subjects which come before us as men, and citizens, is presented in shapes so easily accessible, that he who remains ignorant deserves to be a reproach and a byword. Let no one think then that he is prepared for winter, who has not made arrangements for a liberal supply of food for the mind as well as the body. Well conducted papers, able periodicals, and valuable books must be procured, and they must be read and studied. Universal education is our boast, but it is foolish and vain-glorious, unless it is turned to useful purposes. Every farmer should be a practical utilitarian; "Cui bono," should be his motto; every day should witness some profitable acquisition of knowledge. A few dollars a year paid out for well selected and standard works will in the course of a few passing years provide a farmer with a valuable library. The farmer who has a family is inflicting on them a cruel and irreparable wrong if he by his negligence or his parsimony deprives them of such a resource. The young cannot be idle, and their time if not profitably employed, will be perhaps worse than thrown away. W. G.

Good to begin well; better to end well.
Hasty climbers often have sudden falls.

For the Genesee Farmer.

Willows and Grape Vines for

HEDGES.

Mr. L. Tucker—Although I have not been a strenuous advocate for hedges as fence, believing they were generally harbors for weeds, and took too much ground, yet there are circumstances which render them very proper. Many years ago a friend of mine had about ten acres of swamp land, so miry that he could not make a good fence; on this swamp he planted a double row of yellow willow cuttings nine inches apart, making the rows break joints—these, in about three years, had grown from twelve to sixteen feet high—they were then lopped about six feet from the ground and the tops brought down. After this a row of blue grape vine cuttings was planted one every three feet, along the willows—these in a few years climbed the trees, and have yielded a plentiful crop of grape juice, which has been sold to the distilleries, and furnished a good income; so that the proprietor has not only a good fence but a fruitful one. This land was divided by small narrow ditches, nine inches wide and six deep, every four rods—then between these ditches, when the ground was frozen, he carted on a quantity of pit sand, by which means the water was thrown each way to these narrow ditches, and the land sown with red top grass, and has for more than twenty years yielded a plentiful crop of hay annually. This land, since my remembrance, was considered worthless, but now yields an income of more than two hundred dollars per annum. R. M. WILLIAMS.

Potter, Nov. 29, 1834.

For the Genesee Farmer.

An Easy Method to Prevent

WHEAT TURNING TO CHESS—MY OWN EXPERIENCE FOR EXAMPLE.

About fifteen years ago I purchased a small farm where I now reside. It had been managed in the manner usually practiced by those who have to encounter the difficulties of reclaiming a wilderness, of making the most on every foot of cleared ground; consequently through repeated cropping, added to a considerable share of carelessness, my fields were overgrown with cheat and cockel, insomuch that my first crops were with difficulty made merchantable. I found it necessary to improve the course of farming; and *believing* (and that is an important item in the concern, as the farmer who believes in transmutation will naturally be careless in regard to seed, &c.) that wheat *would not* degenerate into a spurious plant, I procured a fan with a cockle sieve attached to the shoe, of such size as to pass all the chess; and if that did not clean it effectually, finished with a hand sieve, and made it a point to sow none with my wheat. The consequence of this was that the chess gradually disappeared; and I believe that for some years past, I have not grown as much in a crop (generally about twenty acres) as had previously grown in some of my fields on a single rod, while the advocates of transmutation around me generally have it in abundance. I have found it more difficult to overcome cockle when once seated in the ground, and do not know that any one pretends to believe that wheat will change to cockle.

Flushing, Ohio. Ohio Farmer.

For the Genesee Farmer.

A Response to the Interrogato-

RIES OF VIATOR.

Viator desires advice in regard to the manner of forming a new road. The subject of inquiry is not local in its bearing, but intimately connected with an important branch of public economy. A correct solution of the questions submitted by that gentleman, may go far towards producing a general revolution in the practice of making and repairing roads. That there is the utmost need of such a revolution, Viator is known, from his numerous and sensible essays on the subject of roads, to be fully aware. No doubt, it was chiefly with intent to excite inquiry on this interesting subject, and thus benefit the general interest, that he has submitted his case. It is a praiseworthy experiment. An enlightened community should promptly second his patriotic views. Who then will respond to the interrogatories of Viator? I will, and while I do this, let a multitude of others do the like.

Having thus briefly remarked, I hasten to consider the subject of inquiry. "A road," says Viator, "is supposed to be laid out through a field, but not worked, and the question is, in what way can the overseer proceed to discharge his duty to the public in the best manner?" The soil, as the writer further remarks, is, to the depth of six or eight inches, a rich loam of a very dark color, occasioned by an intimate intermixture of decayed vegetables; but the *subsoil*, he adds, is rather gravelly—in other words, a compact loam, through which gravel, and small rounded stones are disseminated.

Two modes of operation are proposed. The one is, to adopt the practice of turnpiking as it is called; that is, ploughing at the sides, and elevating the path in a sloping form, scraping upon it a mess of dirt, thus prepared by the operations of the plough, and replete, as dirt thus obtained always is, with the roots of grass, and other vegetable substances. To this mode of operation, there are, if I mistake not, serious and very weighty objections. 1st. It is not easy to be seen what advantages are to be gained, by thus elevating the path. None surely, in regard to the escape of water that may fall upon it. The wheels of carriages, passing on roads thus formed, never fail to produce deep longitudinal ruts. Into these the water is collected, and there it must remain, until it have time to penetrate into the ground, or escape by evaporation. Although some of the water, falling at the right and left of the carriage track, may escape, in consequence of the elevated and sloping form of the path, yet it is certain, very little if any, will escape from the track path in the center. Here the water will be retained, as in a reservoir, and consequently, the path will be much worse than it would have been, if there had been no elevation.

2d. The materials to be used in the construction of the road, if this plan be adopted, are altogether objectionable. Surface soils, composed in considerable part, as this is, and as such soils always are, can furnish no other than bad materials to be used in the construction of roads. Roads formed of such materials, can never, except when the ground is quite dry, be rendered sufficiently compact and solid to answer well the intended purpose. It is worthy of remark too, that

these materials are rendered less fit for that use, by the operations they undergo in ploughing and scraping. By these means, their parts are broken and divided, and consequently, the mass which they form, is rendered far less compact and solid, than it would be, if composed of similar earth, remaining in its natural position. This fact is too obvious to need the least illustration.

3d. Another objection to elevated roads is well stated by Viator himself, that is, they are not favorable to sleighing, as the snow falling on them is subject to be blown off. For the reasons thus assigned, I disapprove the mode of operation first submitted by Viator.

The other plan is, to remove all the soil from the part intended for the path, to the depth of six or eight inches, rendering the newly formed surface as nearly level and smooth as practicable. The soil thus removed, is not to be thrown into embankments, but carried to a neighboring field, where it may be useful. Gutters, to the depth of twelve inches, or thereabouts, are to be opened at the sides.

Respecting this plan, I shall say little more than to express my earnest desire, that its merits may be tested by experiment. If the ground is so formed as to admit of outlets from the side gutters at suitable distances, I see, in this plan, nothing objectionable. Not unlikely it will be found a far better way of constructing roads, than that of turnpiking them. Certainly, it cannot be worse. Unfortunately, the practice of turnpiking is now almost universally prevalent in the country. Whoever will contribute any thing, even the smallest mite, towards breaking up this absurd practice, will thereby render himself a public benefactor.

Viator will permit me to suggest another mode. If it should not be thought advisable to adopt either of the plans above submitted, then try another, more simple, and less expensive. It is this: Render the ground where the path is to be made, level and smooth, by breaking down all unevenness, if there is any. Next remove from the way all obstructions, such as stones, stumps, logs, &c. All this being done, consider the road as finished. It cannot be expected it will be a good road, at all seasons; but it will not be so bad at any time, as it would if the ground should be disturbed by the operation of a plough, or any other implement; certainly not so bad, by many degrees, as if it were made after the plan first submitted. If surface soil must remain there, let it remain as nature has placed it; for any alteration will render it less compact and solid. The road will, at first, be spungy, especially in wet seasons, this being attributable to grass roots, and other vegetable substances, contained in the soil. But, as these substances will be getting away, by exhalation, by wind and other causes, the road will progressively become better, and in a few years, perhaps, it will be found an excellent road.

Never attempt to mend a breach in any road, by throwing in turf, or earth intermixed with vegetable substances. Use nothing for this purpose, but small stones, gravel, earth free from vegetable remains, or other substances, equally solid and durable. PATHMASTER.

He is rich who owes nothing.

For the Genesee Farmer.

Improved Breeds of Cattle.

Having finished the business part of my letter, and with so much blank paper left under my hand, I thought I would indulge some few remarks on what has lately appeared in the columns of your paper; by which I perceive that Lignator, with a ready but an honest zeal, has picked up his axe, and laid it in pretty close to the root; and then, forsooth, calls upon me to dig up the stump! I thank him for his good opinion of my industry and ability, but I know something of grubbing; and I take it to be no easy job, for if I may judge the tree by its products, it has been vegetating in the same spot for many a year, and is deeply rooted in a primitive soil. Better, me thinks, to plough round it, and let time do the rest. For my own part, I never work so hard as when getting out a stump; and am never so much puzzled what to do with it as when it is out.

Let me, however, suitably acknowledge the politeness intended me, by calling my attention to the article by *Ornus;* but I really supposed enough of positive facts and experimental proof, could already be found in the various Agricultural publications of the day, not only in England, but in this country,—as well as in the columns of your own useful paper,—to establish the superior value and distinctive characteristics of the improved breeds of cattle—the opinions and assertions of Ornus to the contrary, notwithstanding. Indeed, it seemed to me they were too far behind the times to require comment—they belong to the days of "White Rose" and her progeny of 1823, *then* ranking, I doubt not, among the best animals in the country; for there were but few of the breed imported; but now "Wye Comet" could not more than sustain his claims as a second rate animal for *individual* excellence. And the *incompatible* qualities, as Ornus terms them, are not found united in the yards of various breeders where selections have been made with that view to the two qualities of rapid feeding and deep milking. I question not the luxuriance of the pastures, either in Maryland or Pennsylvania, for I know them both; nor would I wish to transplant Ornus from his native soil; but there is something in the cool valley of the Butternutts, and its well watered lands, in its unparched verdure and sweet herbage, that will enable him to see there what it would seem he had not found at home, viz, "*Straight backed, square rumped, wide loined, full chested and deep flanked animals*," that are good milkers. He would then find exceptions to the fact he has asserted to be so invariably established by nature; and I suspect it would puzzle his "fifty dairies" of native cows to produce *one single* animal that would exceed in quantity of either milk or butter, some individuals of the few Improved Short Horn cows, that are to be found in that little valley.

Lignator has shown us, that there is some risk in naming any particular individual to be the *best* of his kind, unless we are fully competent to the criticism; as it at once affords to others a standard by which our judgment and knowledge may be tested. It is therefore better and safer for the amateur, the essayist, and city farmer, to deal in generals, and, perhaps, less injurious to others, who look to your columns for practical knowledge, that he should do so. I must think with Lignator, that Ornus' selection of "Wye Comet" was an unfortunate one; showing want of opportunity for comparison, or want of familiarity with the subject. It is unnecessary to particularise farther, as every judge of high bred stock, who has seen him, must know his deficiencies, and I have no disposition to point out the defects of any animal in a private yard; but when animals are exhibited, I consider them fair subjects of discussion and criticism, which may be rendered very useful when judiciously and correctly made; but indiscriminate praise of an imperfect animal, if productive of any other effect than to expose the panegyrist, must be injurious, as it tends to mislead those who may resort to such exhibitions for information and comparison.

Having both room and leisure, if your readers will find patience, I will trouble them with one more remark. There is, I think, one general error which attends the comparison, so often made, by the casual observer, between the native and imported breed of stock. With the former the country is filled; they occupy all our land, and are to be found in every man's yard; and out of this vast multitude, by which they have been surrounded all their lives, they can remember instances enough of any particular excellence, to make them suppose their natives are at least equal to the imported variety, while these latter are so few in number and so little known (as a breed) that their excellence is supposed a casualty. So Ornus asserts, he can select out of "fifty dairies" (containing perhaps in all 1500 cows) better animals than can be found among the Improved Short Horns, of which, I think it likely, he never knew fifty individuals, but still, in my opinion, he will find that, take the *relative proportion* of deep milkers to the whole number kept, and the excellence will be found decidedly in favor of the Improved Short Horns; at least such has been the experience of others. Again, let Ornus take home these *reputed* milkers from the "fifty dairies"—for I presume *he* had it from the dairy man, or the dairy man's wife or his daughter,—and he will find an alarming difference between the milk that was said to fill the dairy man's "twelve quart pail" full night and morning, and that which is measured by gallon-pots under his own eye. I am yours, &c. R.

Gypsum.

Raspail has decided, as the result of a series of experiments, that "it is not the leaves of the liguminous plants that absorb the gypsum which is dusted over them, but the roots, when the dew or rain has washed it into the soil; and hence the advantage which has been found of applying this power a little before the dew comes on." It was the practice of John Taylor, conspicuously known as the author of Arrator, and one of the best practical farmers in Virginia, to sow his plaster, for tillage crops, before the last ploughing, that it might be buried in the soil, where the roots of plants required it. In applying it to grass lands, he recommended, if our memory serves us, that it be applied early, that the spring rains might convey it to the roots. We have in the pamphlet of Judge Peters, upon the application of Gypsum, another corroboration of the correct-

ness of M. Raspail's conclusions: In many instances there narrated, where the gypsum was sown at the commencement of a drouth, or late in the season, it produced no apparent benefit that year. It would be useful if farmers would satisfy themselves upon this head, by sowing a part of a field early and a part late, a part before the last ploughing, and a part upon the growing crop. So far as our opinions have been formed from practice, they are in favor of sowing on grass in April, and for tilled crops before the last ploughing.—*Cultivator.*

Marl.

We have received for analysis, a specimen of marl found in Granville. It proves to be of little value for agricultural purposes. It has too much clay, and too little of carbonate of lime in its composition. The rule in England is, that unless marl contains more than 30 per cent of carbonate of lime, it is of no value to the farmer. "Of all the modes of trial," says Parke, "the one best suited to the farmer, is to observe how much carbonic acid gas the marl gives out, and this he will learn by dissolving a little of it in diluted muriatic acid, and observing what portion of its weight is lost by the escape of the air. Thus, if an ounce loses only from 40 to 44 grains in weight, he may conclude that the ounce contained only 100 grains of carbonate of lime,"—and consequently is not applicable in those cases where the soil requires lime. The marl should be completely dried and pulverized previous to trial, and both it and the acid should be accurately weighed before and after the test, in order to know the amount of gas which escapes, and which amounts from 40 to 44 in every 100 parts of carbonate of lime. It is to be borne in mind, however, that clay improves the mechanical texture of sands as well as lime, and tends to increase their productiveness. In *this point of view*, therefore, the Granville marl, if transportation is not too expensive, may be applied to sandy porous soils with permanent advantage. On light sands, clay is of as much value as lime. Neither lime nor clay furnish food to plants, yet the presence of both is necessary to adapt a soil to healthy, vigorous vegetation.—*Cultivator.*

From the Intelligencer and Expositor.

Improvement of Soil.

If an inquiring mind will go into the woods, where the soil is what we term rich land, and view nature at work, in nature's own way, he will discover readily, that for a considerable depth this rich soil is a composition of vegetable matter principally, more or less decomposed,—in common language well rotted. He will discover, that what he applies the name of soil to is composed, almost entirely, of the decayed leaves of the trees with weeds and grass, and rotton wood—perhaps the production of centuries. But on a nice examination of this rich soil, he will be compelled to conclude, from evidence before his senses, incontrovertible, that decayed LEAVES, form the principal part. If he wishes for conclusive corroborating testimony, he will heap up a mass of them in a pen, sprinkling the mass with lime, and he will find after the process of fermentation, and decomposition has done its office, that the product will, on application to poor soil, produce the finest vegetation, and prove to his senses that it contains the pabulum, or food of plants, in a high degree. By still going on with his experiment, he will find ultimately, that leaves when decomposed, with the aid of decomposing agents, produce an admirable assistant to vegetation, and by forming a mass of leaves, spriakling the leaves as he forms the mass, with lime, and adding a small portion of rich moist earth amongst the vegetable matter, he will find, on applying it to the earth for the purpose of aiding vegetation, that he has got a pile of manure.

From this evidence before him he will readily conclude, if capable of the operation of common sense, that for the purpose of littering animals, and as an assistant, in forming a compost manure, leaves, especially if gathered while charged with their whole elementary principles, must be an admirable auxiliary, in the production of the dungstead, and worthy of being most assiduously collected for that purpose.

Amongst weeds, or green vegetable substances, experiment has amply decided, that those which produced the most putrid and nauseous effluvia, during fermentation, were found producing the most active effect on the growing crop. This fact seems to settle, by positive proof, the correctness of the theory of many plants feeding rapidly on gases, evolved during the process of fermentation, through the medium of their leaves. As it would be highly desirable, previous to laying down any plan for making manure, in the form of compost, to have some idea of the relative value of different ingredients, which present for that purpose, it may be proper to have some facts placed before us. Leaves piled up in a pen, with alternate thin strata of swamp mud, when partially decomposed are found a superior preparation for the Irish potatoe crop. Put around the roots of fruit trees, this compost has been found to produce a healthy and vigorous growth. Its operation has been much increased in its efficacy, by the addition of lime to the mass. The finest Irish potatoes that I have seen produced in a southern climate, were produced by the addition of this compost.

A pen was made with small rails, a stratum of leaves, trampled down to twelve inches in depth, a sprinkling of lime added, after sprinkling the leaves well with muddy water three or four inches of swamp mud was then added, and this course continued until the pen was six feet in hight. This compost was made up in the fall, on the first falling of the leaves, and applied to the potatoe crop in the spring. The effect on the following crop of CORN, was all that could be desired. A second pile was constructed with a stratum of leaves, two feet thick, sprinkled well with lime, previously, with muddy water—two carts came up, the one loaded with swamp mud, and the other with dung—from opposite sides the throwing on commenced, at equal pace, so as to mingle the two last well; on the layer of mud and manure being completed, say about four inches thick, another layer of leaves was added—sprinkled with water from a pond, then lime, mud and manure, and continued, until the pile was about six feet in hight—a little earth was thrown on the top—I am satisfied the same volume of dung, spread over the same surface, would not have exceeded in production, either in the potatoe or corn crop, that followed, and to which the composition was applied, on planting. The following crop on both grounds was COTTON—it was superior—the seed was drilled in the old corn, and potatoe rows, opened with a Scooter plough. The following year, seed that came from the cotton, the year previous, was applied to a second corn crop, which much surpassed the first, indeed was amongst the finest corn crops to be found—Wheat and Rye followed and were superior.

I give this detail to show that the efficacy of leaves, is decided, in their action on plants, as a manure, when decomposed, for in the crops above stated, they were the basis of the manure that was applied, it being perfectly impossible for all the dung, and lime, that was employed for the formation of the compost, to have produced half the effect, when spread over the soil, or used as the compost was applied. PLANTER.

Swine.

He that attempts to fatten his hogs in winter unless their pen can be kept comfortably warm without extra expense of fuel, will be a loser. But if warm winter habitations with dry and cleanly lodgings can be afforded to the animals they will fatten as well, and with as little food in winter as in summer. This may be in a good measure affected by the construction and location of their pens. Their styes may be on the south side of an acclivity, and defended on the west, north and east by banks or walls of earth against the cold winds of winter, with some contrivance like a swinging door, which will close of itself, to prevent the access of cold at the entrance. In that case they will thrive on but a part of the food, which would be necessary, in an exposed situation, to enable them to support a sorry existenee in opposition to the incessant assaults of the pitiless elements. In front of their pens may be a well inclosed yard, which will answer as a receptacle for weeds, fallen leaves, brakes, &c. the raw materials of their swineships' manure manufactory. Swine, as well as cattle intended for the shambles, well and warmly lodged in winter are half fed, but if not made comfortable in that respect are scarcely worth feeding; and attempting to fatten them is like laboring to fill sieves or broken cisterns with water. With store animals the case may be different. If growing stock which it is wished to keep on hand a year or two or longer, are too warmly housed, they are liable to suffer in cases of accidental or inevitable exposure, much more than those which have never been accustomed to such indulgence.

With regard to food for fatting swine, it was remarked by the Rev. Mr. Elliot, "I know of nothing that will fatten hogs faster than a dough of meal and water. But as this is expensive food, the dough may be minced with boiled potatoes, or boiled carrots. They eat these mixtures as well as the dough by itself; and it appears to make no material difference in their fattening. In the mixture, barley meal will answer instead of Indian; which should be attended to in our more northern parts, where two bushels of barley may be as easily raised as one of Indian corn. Both kinds of meal I have found to be a good mixture with boiled potatoes; but it should by all means be a little salted to give it a good relish."

The following mixture for fattening swine has been recommended, and we have no doubt will answer a valuable purpose: Wash potatoes clean, boil and mash while hot—mix in at the same time oat-meal and peameal. Put the mixture into a large tub, which must stand till it becomes sour but not putrid. Keep a quantity of this on hand, always fermenting and give it to your hogs as often as they will eat.—*New Eng. Far.*

Save your Wood.

"A farmer" says, "a very considerable saving may be realized by using the saw instead of the axe in preparing wood for the fire, although very few country people are aware of the fact, having never tried the experiment. A saw suitable for this purpose costs no more than an axe, is as easily kept in order, and with careful usage will last as many years. A man can saw as much, and probably more wood in the same time than he can cut with an axe. Scarcely any litter is made, the wood may all be cut of an exact length, and on the whole the annual saving to every house-holder, by using the saw instead of an axe, would in the course of several years amount to something of considerable consequence. —*Ib.*

Scarcity of Fruit.

The present scarcity of fruit has been unequaled for a number of years. Farmers in the country who have a few apples, though of an inferior quality, and are willing to deny themselves the luxury of eating them, may obtain a large price for them in this city. In the eastern part of Worcester county there has been a tolerable crop of apples, and the farmers have realized great profits from their orchards. Five hundred barrels, it is said, have been gathered in one orchard in Waltham. A few days since a farmer sold in Worcester twenty-five bushels, the product of one tree, for $25.—*Hartford Review.*

Botanical Tour.—Among the passengers in the packet ship South America, which sailed on the 1st inst. for Liverpool, were Messrs. Brown and McNab. These gentlemen, says a correspondent, arrived here in June last on a botanical tour through the United States and Canada, under the auspices of the Royal Botanic Garden of Edinburgh. They have during this short period explored an immense tract of country, and have taken back with them several hundred entire new plants to add to that already splendid establishment. They express themselves delighted with our *Eden-like* wilderness—glorious decked margin rivers, and magnificent lakes. They have, in pursuit of their object, taken up their abode in dreary forests and marshes, and paddled their canoe with the Indians on Lake Huron. These scientific expeditions having matters of pure taste in view, it is to be hoped will be often repeated, as there is perhaps no region on earth so full of interest to the lover of botanical research as North America, whose noble lakes, rivers, and prairies, are, from the month of May till September, perfect gardens of the most beautiful flowers and shrubs, and which, for the most part, succeed admirably when transplanted into the well kept gardens of Europe.—*New York Gazette.*

Spade Husbandry.

We have no expectation of ever seeing spade husbandry adopted in our country, on any thing like an extensive scale. The price of manual labor forbids it. Yet we cannot refrain from noticing an interesting article upon this subject in the Sept. No. of the Edinburgh Quarterly Journal of Agriculture. A premium of £100 was given to Mr. Archibald Scott, "for the best plan of furnishing employment for the surplus laborers of England." Mr. Scott's *plan* consists in trenching with a spade the ground intended for his grain crops, and thus substituting manual labor for cattle power in cultivating his fields.—The plan is not merely theoretical, but has been reduced to extensive practice, and found to be highly profitable. Mr. Scott pays his laborers 1*s.* 6*d.* per day, equal to about 33 cents, they boarding themselves. At this price of labor, the trenching costs him £4 10 (about $20) per Scotch acre. The soil is 18 inches, the top of which is thrown to the bottom, and the whole well pulverized. The first experiment was made in 1831, upon 13 acres of summer fallow. The profit, per acre, upon the trenched ground, was £3 18 9, while that upon adjoining land, ploughed as usual, was only 9*s.* 6*d.* It is to be observed that the ploughings were repeated six times, which must unnecessarily have swelled the expense. In 1832, Mr. Scott trenched 44 acres with like success. His account of expense and profit stands thus:

By average of 44 bushels per acre, at 7*s.*		£15 8 0
To rent of land per acre,	£2 10 0	
Expense of trenching,	4 0 0	
Seed,	1 1 0	
Cutting, thresh. & marketing,	1 10 0	
Profit,	9 7 0	
	£15 8 0	£15 8 0

Thus leaving a nett profit, per acre, of about $28. In 1833, Mr. Scott trenched about 100 acres; and such was the apparent advantage of his method, that his example was being extensively followed in East Lothian. The Scotch contains about a quarter more than the English acre, or about 200 rods; and to trench this, it requires, it seems, 60 days' labor.

The effect of trenching is to clean the ground, and to induce increased fertility, by turning the exhausted surface under, and effecting a complete pulverization. In gardens and other old cultivated grounds, trenching is sometimes resorted to even with us, and its advantages are found to repay the labor. The data furnished by Mr. Scott's experiments are worth preserving.—*Cult.*

Worth attending to.—As this is about the time when our friends are beginning to smoke their meat, it may do them some good to inform them that a small bit of brimstone, about the size of a chinquepin, thrown into the fire once a day, will effectually prevent skippers and bugs from getting into the bacon. This information we have from a friend whom we highly esteem, and who assured us that he had so fully tried the efficacy of this plan, that he wished us to make it generally known. He added, that no uncommon smell or taste is imparted to the bacon. We deem this information of great importance to those who have bacon to cure; also, to those who have to buy it.—*Salisb. Watchman.*

List of Payments

For the Farmer from Nov. 27, to Dec. 11, 1834.

David Good, for vols. 4, 5, 6, 7 and 8—to Jan 1, 1839.
Bernard Peyton, to April 1, 1836.
Allen A. Hooker, for vol. 5.
Jared Patchen, vol. 5.
Edward Garrigues, vol. 5.
Hiram Capron, to Oct. 1, 1835.
Mr. Wethering, Guelph, July 1, 1835.
Messrs. Davies, do., July 1, 1835.

For vol. 4.

Hinchman Thorn. | Alexander White,
Gulielmus Wing. | Otis Baker.
John N. Rose.

Last half of vol. 4.

Cephas Hayes. | Cyrus Wilmarth.
Jared Smith. | Erastus Freeman.

PRICES CURRENT.

ARTICLES.	PER	Dec. 13. ROCHESTER.	Dec. 6. NEW-YORK.
Ashes—Pot....	100lbs.	$3,40.....	$4,20 a 4,25
—— Pearl..	.....	3,60.....	5,20 a 5,50
Beeswax, yellow	lb.	0,18 a 0,20	21 a 22
Candles, mould	.....	0,11½a0,00	10. a 13
—— dipped	.....	0,11 a 0,00	9 a 11
Cloverseed....	.....	6½.....	9 .a. 10
Flax, American.	.....	.....	8. .a. 09
Flax seed, clean	tierce	9,00a10,00	14,25a14,50
Flour, Western.	barrel	4,75.....	5,06a 5,18
Grain, Wheat..	bushel	0,75a. 0,00	1,04 a1,06
—— Rye....	.....	0,50.....	65 .a. .66
—— Oats...	.....	0,28 .a. .30	40 .a. .41
—— Corn...	.....	0,50.....	62 .a. .66
—— Barley..	.....	0,50 .a. .00	62 .a. .64
Hemp, Americ'n	ton	.....	100 a 120
Hops, 1st sort .	lb.	0,20.....	14 .a. .16
Plaster Paris...	ton	6,50 a 0,00	2,00 a2,25
Beef, Mess....	barrel	7,50 a. 9,00	8,50 a 8,75
—— Prime....	.....	5,50 a 0,00	5,50 a 6,00
Pork, Mess....	.....	15,00a00,00	13,00a13,50
—— Prime....	.....	10,00.....	8,50a9,00
—— in the hog.	100lbs.	3,50 a 4,50	5,00.....
Tallow.....	.....	6,00 a 7,00	7,00 a 7,50
Hay.....	ton	9,00 a 11,00	9,75a11,20
Apples.....	bushel	50 .a. 100	.....

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They have also an assortment of superior Horticultural Implements, Books, &c.

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Monroe Horticultural Garden & Nursery.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or Chinese Mulberry, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

Orders by mail or otherwise will be promptly attended to, and packages delivered in Rochester, or at the Canal one mile from the Nursery.

☞ Orders for *Mr.* Rowe's Nursery received by the Publisher of this paper.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

Greece, *Monroe* co. N. Y. Sept. 13, 1834.

Moubray's Treatise on Poultry, &c.,

WITH abridgements and additions by the Editor of the New England Farmer, price 50 cts. For sale by HOYT PORTER & Co.

COBB'S MANUAL OF CULTURE OF SILK, &c. for sale by
HOYT & PORTER.

Old Winter is Coming.

BY HUGH MOORE.

Old Winter is coming—alack!
How icy and cold is he!
He cares not a pin for a shivering back—
He's a saucy old chap to white and black—
He whistles his chills with a wonderful knack,
For he comes from a cold countree!

A witty old fellow this Winter is—
A mighty old fellow for glee!
He cracks his jokes on the pretty sweet Miss—
The wrinkled old maiden, unfit to kiss—
And freezes the due on his lips—for this
Is the way with old fellows like he!

Old Winter's a frolicsome blade, I wot—
He is wild in his humor, and free!
He'll whistle along for the "want of his thought,"
And set all the warmth of our furs at naught,
And ruffle the laces by pretty girls bought;
For a frolicsome fellow is he!

Old winter is blowing his gusts along,
And merrily shaking the tree!
From morning to night he will sing his song—
Now moaning and short, now boldly and long—
His voice is loud, for his lungs are strong—
A merry old fellow is he!

Old Winter's a wicked old chap, I ween—
As wicked as ever you see!
He withers the flowers, so fresh and so green—
And bites the pert nose of the Miss of sixteen,
As she trippingly walks in maidenly sheen!
A wicked old fellow is he!

Old Winter's a tough fellow for blows,
As tough as ever you see!
He will trip up your *trotters* and rend our clothes,
And stiffen our limbs, from our fingers to toes—
He minds not the cries of his friends or his foes—
A cruel old fellow is he!

A cunning old fellow is Winter, they say,
A cunning old fellow is he!
He peeps in the crevices day by day,
To see how we're passing our time away,
And mark all our doings, from grave to gay—
I'm afraid he is peeping at me!

Statistics.

Much curious and valuable statistical information being contained in the American Almanac for 1835, we have thought that an abstract of some parts of it might answer a double purpose, viz: that of entertaining our readers, and of benefitting the publishers by obtaining subscribers. When merchants and others are apprised of the superiority of the American Almanac to every other published in the country, many doubtless will give it the preference.

BANKS.—Massachusetts has 66 State Banks, with a capital of twenty millions—New York has 37, with the same capital—Pennsylvania 33, with a capital of fourteen millions—and Maryland 13, with a capital of six millions. Between the 1st January 1811, and the first July, 1830, there failed in Massachusetts 6 banks, in New York 10, in Pennsylvania 16, and in Maryland 9. The amount of discounts made in the four principal cities of the Union, in 1830, are thus given; New York $103,000,000—Philadelphia $69,306,472 Baltimore $36,211,864—Boston $69,550,000.

COLLEGES.—The total number in the United States is 64, of which the two principal are Harvard University and Yale College. Harvard has 30 instructors, and a library of 40,000 volumes. Yale has 26 instructors, and a library of 8,500 volumes. To this statement may be added that St. Mary's College has 24 instructors, and a library of 10,500 volumes. We submit the above to the attentive consideration of those parents who send their children from Baltimore into New England to complete their education, without being able to assign any better reason than fashion for the preference.

COMMERCE.—The three countries with which the United States have the most commerce, are England, France, and Cuba. The imports from England in 1833 amounted to $36,668,315; from France $13,431,678; and from Cuba, 9,754,787*l*.- The exports were, to England $31,935,441; to France $13,772,221; to Cuba $5,682,700. The States which carry on the greatest foreign commerce, are New York, Massachusetts, Pennsylvania, Louisiana and Maryland. The principal ports are New York, Boston, Philadelphia, New Bedford, New Orleans, Portland, and Baltimore. The tonnage of New York is nearly 300,000; that of Baltimore 47,000. The chief articles of export are cotton, tobacco, flour, rice and pork, the cotton amounting to 36 millions, the pork to 2 millions.

FINANCES.—In 1832, the receipts amounted to upwards of 30 millions, the chief part of which was derived from the Customs. The expenditure was upwards of thirty-four millions, one half of which was in payment of the public debt.

PERIODICALS.—The number of Medical Journals is 8; Law 3; Agricultural 12; Temperance 18; Religious 88; Newspapers 1265.

PUBLIC DEBT.—The total amount is now under 5 millions.

THEOLOGICAL SEMINARIES.—The Presbyterians have 7; Congregationalists 4; Baptists 3; Episcopalians 2; Lutherans 3; German Reformed 1.

Ardent Spirits.

The following document was procured by Mr. Delevan, of Albany, during his late visit to the South:

Being satisfied from observation and experience, as well as from Medical testimony that Ardent Spirit, as a drink, is not only needless, but hurtful; and that the entire disuse of it would tend to promote the health, virtue, and the happiness of the community—We hereby express our conviction, that should the citizens of the United States, and especially all YOUNG MEN, discountenance entirely the use of it, they would not only promote their own personal benefit, but the good of our country and the world.

Signed, JAMES MADISON.
ANDREW JACKSON.
JOHN QUINCY ADAMS.

In connexion with the above the following from President JEFFERSON deserves a place:—

"The habit of using ardent spirit," said Jefferson, "by men in public office, has produced more injury to the public service, and more trouble for me, than any other circumstance that has occurred in the internal concerns of the Government during my administration: and, were I to commence my administration again, the first question that I would ask, in relation to every candidate for public office, should be, IS HE ADDICTED TO THE USE OF ARDENT SPIRIT.

"I say, friend," said a Jonathan to an honest farmer, "you don't know of nobody what don't want to hire nobody to do nothing, don't ye." "Yes I don't," was the reply.

Snake-Charmers.

Our account of the power supposed to be possessed by persons in the art of charming snakes, gave the best evidence we could collect upon the subject. The following communication would imply that the suspicions of trick in this curious process are unfounded.—The writer says he received the narrative from a gentleman of high station in the Honorable Company's Civil Service at Madras—a man of undoubted veracity. "One morning, as I sat at breakfast, I heard a loud noise and shouting amongst my palenkeen-bearers. On inquiry, I learned that they had seen a large hooded snake (*Cobra capella*), and were trying to kill it. I immediately went out and saw the snake climbing up a very high green mound, whence it escaped into a hole in an old wall of an ancient fortification: the men were armed with their sticks, which they always carry in their hands, and had attempted in vain to kill the reptile, which had eluded their pursuit, and in his hole he had coiled himself up secure; whilst we could see his bright eyes shining. I had often desired to ascertain the truth of the report, as to the effect of music upon snakes: I therefore inquired for a snake-catcher. I was told there was no person of the kind in the village; but after a little inquiry I was informed there was one in a village about three miles distant. I accordingly sent for him, keeping a strict watch over the snake, which never attempted to escape whilst we, his enemies, were in sight. About an hour elapsed when the messenger returned, bringing a snake-catcher. This man wore no covering on his head, nor any on his person, excepting a small piece of cloth round his loins: he had in his hands two baskets, one containing tame snakes—one empty; these and his musical pipe were the only things he had with him. I made the snake-catcher leave his two baskets on the ground at some distance, while he ascended the mound with his pipe alone. He began to play: at the sound of music the snake came gradually and slowly out of his hole. When he was entirely within reach, the snake catcher seized him dexterously by the tail, and held him thus at arm's length; whilst the snake, enraged, darted his head in all directions—but in vain: thus suspended, he has not the power to round himself so as to seize his tormentor. He exhausted himself in vain exertions; when the snake catcher descended the bank, dropped him into the empty basket, and closed the lid: he then began to play, and after a short time, raising the lid of the basket, the snake darted about wildly, and attempted to escape; the lid was shut down again quickly, the music always playing. This was repeated two or three times; and in a very short interval, the lid being raised, the snake sat on his tail, opened his hood, and danced quite as quietly as the tame snakes in the other basket; nor did he again attempt an escape. This, having witnessed with my own eyes, I can assert as a fact."

HAPPINESS.—"If you cannot be happy in one way, be happy in another; and this facility of disposition wants but little aid from philosophy, for health and good humor are almost the whole affair. Many run about after felicity, like an absent man hunting after his hat, while it is on his head or in his hand. Though sometimes small evils, like invisible insects, inflict great pain, yet *the chief secret of comfort lies in not suffering trifles to vex one, and in prudently cultivating an undergrowth of small pleasures, since very few great ones, alas! are let on long leases.*"—[Sharp's Let.

"*Education's Riz.*"—A precious youth in a country town in Massachusets, had arrived to the age of *nine* years, when his father sent him to school. He stood beside his teacher, to repeat the letters of the alphabet. 'What's that? 'asked the master. 'Harrow,' vociferated the urchin. 'No, that's A.' 'A!' 'Well, what's the next?' 'Ox yoke.' 'No, that's B.' 'Taint B, neither, it's an ox yoke; crotch all hemlock! Gosh ninety! think I don't know!"